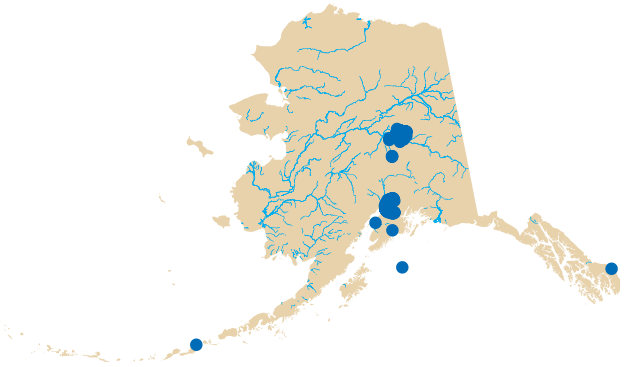
Bird Vetch

Vicia cracca L.



Related Species
Hairy vetch
Vicia villosa Roth

Alternate Names
Tufted vetch

Description
Bird vetch is a climbing perennial plant with weak stems that climb and cling to structures with coiling tendrils at the end of each leaf. Leaves have 8–10 pairs of narrow leaflets. The bluish-violet flowers are borne on a one-sided, many-flowered raceme. Fruiting pods are narrow and lanceolate.

Bird vetch.

UAF Cooperative Extension Service photo by Michael Rasy

Hairy vetch is an annual or biennial vine. Its stems are climbing and weak, growing up to 6 feet long, and covered in long-spreading hairs. The leaves have 10–20 leaflets, which are linear to narrowly lance-shaped and ¾–1 inch long. Tendrils are well developed. There are 20–60 flowers per inflorescence, generally restricted to one side of the stalk. Flowers are purplish-red and ¾–1 inch long.

Similar Species
There are a number of other climbing, blue-flowered legumes in Alaska. Bird vetch is identifiable by lacking a winged stem, as in *Lathyrus* species, or a stem covered in long-spreading hairs, as in hairy vetch. Bird vetch has entire stipules and a many-flowered, one-sided inflorescence. Hairy vetch can be separated from other Alaskan climbing legumes by its long-spreading hairs and its obliquely at-

tached calyx. Common vetch (*Vicia sativa* L. ssp. *nigra* (L.) Ehrh.) is another exotic plant in Alaska, and it can be distinguished from the other two by the presence of pairs of flowers on short stalks. Giant vetch (*Vicia nigricans* Hook. & Arn. ssp. *gigantea* (Hook.) Lassetter & Gunn.) occurs in Southeast Alaska and can be distinguished from bird vetch by the presence of racemes shorter than the leaves. American vetch (*Vicia americana* Muhl.) occurs sporadically in Alaska and has eight or less pairs of leaflets per leaf. Purple crownvetch (*Coronilla varia* L.), an introduced species, has been planted in the Anchorage area. Purple crownvetch has flowers ranging from pale pink to purple and no tendrils.

Ecological Impact

Both species can overgrow herbaceous vegetation and climb over shrubs like alder and willow (Hultén 1968). They have symbiotic relationships with certain soil bacteria

UAA Alaska Natural Heritage Program photo by Irina Lapina

Bird vetch.

that can alter soil conditions due to the fixation of atmospheric nitrogen (GRIN 2004). They are highly palatable to grazing and browsing animals, although hairy vetch is slightly toxic. Hairy vetch flowers are visited by native bees and may alter pollination ecology in the surrounding area (Aarssen et al. 1986). Removal of dense mats of bird vetch

from limbs of conifers has revealed chlorotic needles and limb dieback.

UAF Cooperative Extension Service photo by Michael Rasy

Purple crownvetch, an additional non-native species in Anchorage.

Biology and Invasive Potential

Bird vetch reproduces from copious amounts of seed and by spreading rhizomes. Seeds are viable for many years and large seed banks are common. It establishes in disturbed grassy areas and along roadsides. Seeds are large and not easily dispersed, but they may be carried in the tangled vegetation that clings to maintenance equipment or introduced with topsoil. Bird vetch is adapted to pH levels ranging from 4.9 to 7.0 and all soil textures. It is highly tolerant of fire, drought, and calcium carbonate. It has intermediate shade-tolerance and no cold-stratification is required. Bird vetch withstands the winter temperatures of interior Alaska and requires 110 frost-free days for successful reproduction (GRIN 2004). It is listed as a restricted noxious weed in Alaska (Alaska Administrative Code 1987).

Hairy vetch reproduces entirely by abundant seed. Total seed production likely exceeds 1,000 seeds per square meter for large plants (GRIN 2004). This species persists in cultivated fields but has not been detected in undisturbed sites in Alaska. Seeds are large and not easily dispersed (Welsh 1974). Seeds have a hard dormancy period. This species is adapted to soil pH levels ranging from 6.0 to 7.5 and all soil textures. It is moderately tolerant of drought and calcium carbonate but shade-intolerant. No cold-stratification is required.

Distribution and Abundance

Bird vetch was first planted in Alaska at the Rampart Experiment Station in 1909. It was later planted in Fairbanks and Palmer around 1955 as a potential forage crop and subsequently spread to other areas of the state. It is found in waste places, in old fields, and along roadsides. Origi-

nally native to Europe, it now ranges from Alaska and British Columbia east across Canada to Newfoundland and south to Georgia and Alabama (Klebesadel 1980).

Hairy vetch has escaped cultivation outside of Alaska and spread along roadsides, fallow fields, and other disturbed areas (Whitson et al. 2000). It is native to northern Africa, temperate Asia, and Europe (GRIN 2004), was brought to North America to be used as a rotation crop, and now occurs in every state in the United States.

UAF Cooperative Extension Service photo by Jamie Snyder

Bird vetch monopolizes sunlight by climbing and smothering other vegetation.

Management

Bird and hairy vetch are difficult to eradicate once established. Hand-pulling can be effective for small infestations, but retreatment will be needed several times per year over the course of several years in order to prevent reproduction and exhaust the seedbank. This also applies to mowing, which would be much more cost-effective for large infestations. Herbicide application is reported to be effective for control of bird vetch.

Notes

In its native Europe, bird vetch is one of the most common flowers of hedgerows, heaths, scrub, and coarse grass, where it is known as tufted vetch due to the large number of flowers.